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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/260,478 03/01/99 TITARU

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EXAMINER

MM91/0419

LAXTON, G

ART UNIT

PAPER NUMBER

IONEL TITARU  
4400 E BROADWAY  
SUITE 414  
TUCSON AZ 85711

2838

DATE MAILED:

04/19/01

#15

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/260,478

Applicant(s)

TITARU, IONEL

Examiner

Gary L. Laxton

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2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

#### **Claim 1:**

- Claim 1 recites the limitation "said inductive element" in at least lines 7 and 16. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-7 inherit the same deficiencies.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in combination with .

**Claims 1, 4 and 6:**

Tan et al discloses, in figure 1, a low impedance AC source (26) and a bridge rectifier (32) with rectifying elements.

Furthermore, there is shown a capacitor (38).

However, Tan do not show an inductor connected between the AC source and first input of the rectifier bridge.

Saitou et al teach connecting an inductor between the AC source voltage and a first terminal of a rectifier in order to provide a switching circuit with increased switching frequency.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an inductor between an AC source and first input for many reasons including, filtering the AC voltage and to further add inductive properties to high speed switching circuits such as that taught by Saitou et al.

**Claim 5:**

Tan et al in combination with Saitou et al disclose the claimed invention as stated above except for not allowing the current in

the inductive element to reach zero before the voltage source switches polarity.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the current through an output inductor by varying the timing of the primary side switches to adjust the current level of an output inductive element to better control the output characteristics.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in combination with Saitou et al and further in combination with Cowett.

Tan et al in combination with Saitou et al disclose the claimed invention as stated above except for replacing the rectifier elements with controlled synchronous rectifiers.

Cowett shows a rectifier comprised of controlled switches (26A-26D). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to compose a rectifier out of controlled switches in order to accurately control the rectification process to produce a precise and controlled full wave rectified signal.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in combination with Saitou et al and further in combination with Schutten et al .

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Tan et al in combination with Saitou et al disclose the claimed invention as stated above except for a bi-directional switch.

Schutten et al shows that it was known in the art to use a bi-directional switch (16), of figure 1, that switches to position A or B to assist in shaping the output waveform.

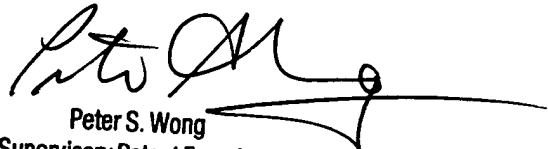
Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a bi-directional switch in a rectifier to aid in shaping the output waveform for more precise output control.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (703) 305-7039. The examiner can normally be reached on 5-4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter S. Wong can be reached on (703) 305-3477. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7723 for regular communications and (703) 305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Peter S. Wong  
Supervisory Patent Examiner  
Technology Center 2800

GLL  
April 13, 2001